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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/542,920	04/04/2000	Patrice Onno	1807.1249	5750

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EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 08/12/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/542,920

Applicant(s)

ONNO ET AL.

Examiner

Qutub Ghulamali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Acknowledgment

1. This Office Action is responsive to the Amendment filed on 06/02/2003.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 5, 7, 11, 13-15, 19, 21, 25, 27-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Charrier et al (US Patent No. 6,501,860).

Charrier et al teaches (Col 7, lines 41-57) a digital signal coding device and method of transforming the digital signal into a plurality of frequency sub-bands distributed in at least two different frequency bands and at least two different resolutions, one having a lower frequency and the other a higher frequency, dividing the signal into the same number of blocks (fig 12) and selecting first and second blocks and transforming (preprocessing) the second blocks by applying a second preprocessing mode and coding the sub-band including the preprocessed blocks by applying a third coding mode to form third blocks with the same predetermined number of samples, the division circuit 4 (fig. 5), divides signal into same number N of blocks B_{pn} , where the index p is an integer, between 1 and 9, which represents the order of the sub-band in question, and the index n between 1 and N, is an integer which represents the order of

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the block in the sub-band in question, the order of the blocks is a priori arbitrary, but predetermined, with blocks ordered in the same way in all the sub-bands for example from left to right and from top to bottom, the surface of the blocks is divided by four, passing from the resolution RES1 to the resolution RES2, and from the resolution RES2 to the resolution RES3, a known method of coding a digital signal in this case of a digital image, the quantized indices are finally coded by entropic coding without loss (col. 1, lines 29-34; col. 2, lines 29-64; col. 12, lines 1-40).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4, 8-10, 16-18, 22-24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Charrier et al (US Patent 6,501,860) in view of Cho (US Patent 6,487,318).

As applied to the above claims, Charrier et al et al teaches every feature of the claimed invention, but does not explicitly teach transformation, as a wavelet transform. In the same field of endeavor, Cho teaches transforming image data into wavelet packet coefficients having several frequency bands (col. 3, lines 60-62) and further processing four smallest sub-bands and relocating and integrating (grouping) the sub-bands and other adjacent bands, having the same size into a bigger band to a wavelet transformed digital signal (figures 7A and 8).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Charrier et al device to include use of a wavelet transforming method to transform the digital signal as taught by Cho, see col. 4, lines 54-67 and col. 5, lines 1-6.

Response to Arguments

6. Applicant's arguments filed 06/02/2003 have been fully considered but they are not persuasive. Applicant traverses the rejection by mainly arguing that the cited reference Charrier et al (US Patent No. 6,501,860), fail to teach the limitations of the claimed subject matter. However, the examiner respectfully disagrees:

7. In response to applicant's argument that with reference to claim 1, the examiner respectfully likes to draw applicant's attention to col. 12, lines 1-39, that clearly states that the circuit 4 of Charrier et al (US Patent No. 6,501,860), divides the signal into blocks and transforming the blocks into same number of N blocks wherein the blocks are a set of coefficients extracted from the sub-band in order to form a vector, which reads on claim 1 that states "a digital signal representing a physical quantity, into signals of frequency sub-bands distributed in at least two different frequency bands and at least two different resolutions, comprising the steps of: dividing the signal..."

8. As regards applicant's argument that the number of samples cannot be predetermined in Charrier et al, the examiner respectfully would like to draw applicant's attention to col. 2, lines 64-67; col. 2, lines 1-3; col. 12, lines 12-14, that clearly reveals that, in order to allocate a given block in an optimum fashion it would be necessary to know in advance all blocks to which code

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is allocated, and therefore to know the result of the allocation and therefore, necessary for the series to be fixed and known in advance.

9. Based on the information disclosed in the reference art the examiner therefore, considers the reference cited reads on the claim making this argument mute.

Based on the above rational, it is believed that the limitations of claim 1 and independent claims 7, 15 and 21 each include features which are similar to those discussed above in connection with claim 1, is met by reference to Charrier et al (US Patent No. 6,501,860). Therefore the rejection to claim 1 and claims 7, 15, 21 is still maintained.

10. The rejection to claim 5, 11, 19 and 25 has been withdrawn because of applicant's further explanation as accepted by the examiner.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (703) 305-7868. The examiner can normally be reached during normal business days Monday-Friday from 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703 305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 305-3988 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-4750.

QG.
August 10, 2003



DON N. VO
PRIMARY EXAMINER